

Vehicle longitudinal acceleration data	RCM	This message provides the ABS module with the current vehicle longitudinal acceleration data and notifies the ABS module if the data is valid or invalid. The ABS module uses the longitudinal acceleration data for ESC feature operation.
Vehicle yaw rate data	RCM	This message provides the ABS module with the current vehicle yaw rate data and notifies the ABS module if the data is valid or invalid. The ABS module uses the yaw rate data for ESC feature operation.

DESCRIPTION AND OPERATION > ANTI-LOCK BRAKE SYSTEM (ABS) AND STABILITY CONTROL - SYSTEM OPERATION AND COMPONENT DESCRIPTION > ANTI-LOCK BRAKING

The ABS module continuously monitors brake pedal input, longitudinal vehicle motion and the rotational speed of each wheel. The ABS module receives the brake pedal input from the PCM and the longitudinal acceleration sensor information from the RCM. The PCM sends the brake pedal input message to the GWM over the HS-CAN1, the GWM relays the message to the ABS module over the HS-CAN2. The RCM sends the longitudinal acceleration sensor message directly to the ABS module over the HS-CAN2. Wheel speed information is received by the ABS module using 4 wheel speed sensors. When the ABS module detects an impending wheel lock during a braking event, the ABS module modulates brake pressure to the appropriate brake caliper by opening and closing the appropriate solenoid valves inside the HCU while the hydraulic pump motor is activated. Once the affected wheel returns to the desired speed, the ABS module returns the solenoid valves in the HCU to their normal position and deactivates the hydraulic pump motor.

When the ABS module is initialized (ignition ON), a preliminary electrical check of the wheel speed and brake booster vacuum sensors is carried out, and the hydraulic pump motor is activated for approximately one-half second. During this time, a buzzing or humming noise may be heard and a vibration may be felt in the brake pedal, this is a normal condition. During the module initialized self-test, the pump motor check is carried out at approximately 10 km/h (6.2 mph). Any malfunction detected in the system causes the ABS module to set a DTC, disable the ABS function and send a message to the IPC to illuminate the ABS warning indicator. The base hydraulic power assist braking system functions normally.

DESCRIPTION AND OPERATION > ANTI-LOCK BRAKE SYSTEM (ABS) AND STABILITY CONTROL - SYSTEM OPERATION AND COMPONENT DESCRIPTION > ELECTRONIC BRAKE FORCE DISTRIBUTION (EBD)

On initial application of the brake pedal, full pressure is applied to the rear brakes. The ABS module then uses wheel speed sensor inputs to evaluate rear wheel slip. Once the rear wheel slip exceeds a